

**National Transportation Safety Board  
Washington, DC 20594**

**Brief of Accident**

**Adopted 05/13/2003**

DEN03LA013		11/03/2002		Broomfield, CO		Aircraft Reg No. N9288M		Time (Local): 17:34 MST					
Make/Model:		Mooney / M20E				Fatal		Serious		Minor/None			
Engine Make/Model:		Lycoming / IO-360-A1A				Crew		0		0		1	
Aircraft Damage:		Substantial				Pass		0		0		2	
Number of Engines:		1											
Operating Certificate(s):		None											
Type of Flight Operation:		Personal											
Reg. Flight Conducted Under:		Part 91: General Aviation											
Last Depart. Point:		Same as Accident/Incident Location				Condition of Light:		Night/Dark					
Destination:		Same as Accident/Incident Location				Weather Info Src:		Weather Observation Facility					
Airport Proximity:		On Airport				Basic Weather:		Visual Conditions					
Airport Name:		Jeffco Airport				Lowest Ceiling:		None					
Runway Identification:		29R				Visibility:		40.00 SM					
Runway Length/Width (Ft):		9000 / 100				Wind Dir/Speed:		Variable / 004 Kts					
Runway Surface:		Asphalt				Temperature (°C):		-1					
Runway Surface Condition:		Dry				Precip/Obscuration:		None / None					
Pilot-in-Command		Age: 53				Flight Time (Hours)							
Certificate(s)/Rating(s)						Total All Aircraft:		138					
Private; Single-engine Land; Glider						Last 90 Days:		37					
Instrument Ratings						Total Make/Model:		27					
None						Total Instrument Time:		4					

The pilot said he made a full flap landing. Instead of keeping the nose wheel off the runway, he relaxed elevator back pressure. When the nose wheel contacted the runway, the airplane swerved to the left. The pilot attempted to straighten the airplane using right rudder and brakes, but was unsuccessful and he lost directional control. The airplane went off the runway and traveled across snow-covered grass. The right main and nose landing gears collapsed, and the airplane slid to a halt on the upslope side of a drainage ditch parallel to the runway. Postaccident examination disclosed the steering horn attach bolt was sheared at the nut end and the bolt head was slightly backed away from the nose gear truss where it attached. Mooney Service Bulletin M20-169, dated July 18, 1968, requires the replacement of the AN3-20A bolt with a NAS623-3-29 screw. This had not been accomplished. No brake discrepancies were noted. It could not be determined if the bolt had sheared prior to or upon touchdown or during the impact sequence. The pilot later said that if he had held the nose wheel off the runway as long as possible instead of relaxing elevator back pressure when the airplane touched down, speed would have dissipated and he could have kept the airplane on the runway by using differential braking. Damage consisted of collapsed right main and nose landing gears, buckled wing and nose gear attach points, firewall, several wing ribs, and crushed wing tips and tail cone.

Brief of Accident (Continued)

DEN03LA013				
File No. 13326	11/03/2002	Broomfield, CO	Aircraft Reg No. N9288M	Time (Local): 17:34 MST

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Occurrence #1: LOSS OF CONTROL - ON GROUND/WATER  
Phase of Operation: LANDING - ROLL

- Findings
1. (F) AIRCRAFT HANDLING - IMPROPER - PILOT IN COMMAND
  2. (C) LANDING GEAR,STEERING SYSTEM - SHEARED
  3. (F) MAINTENANCE,SERVICE BULLETIN/LETTER - NOT COMPLIED WITH - OTHER MAINTENANCE PERSONNEL
  4. (C) DIRECTIONAL CONTROL - NOT MAINTAINED - PILOT IN COMMAND
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Occurrence #2: ON GROUND/WATER ENCOUNTER WITH TERRAIN/WATER  
Phase of Operation: LANDING - ROLL

- Findings
5. AIRPORT FACILITIES,RUNWAY/LANDING AREA CONDITION - RUNWAY
  6. TERRAIN CONDITION - SNOW COVERED
  7. TERRAIN CONDITION - GRASS
  8. (F) TERRAIN CONDITION - DITCH

Findings Legend: (C) = Cause, (F) = Factor

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The National Transportation Safety Board determines the probable cause(s) of this accident as follows.  
the pilot's failure to maintain directional control after landing due to a sheared steering horn attach bolt that should have been replaced by maintenance personnel in compliance with an outstanding service bulletin. Contributing factors included the pilot's improper aircraft handling (relaxing elevator back pressure at high speed during rollout) and the ditch.